REMARKS

Applicant thanks the Examiner for the very thorough consideration given the present application.

Claims 1-17 are now present in this application. Claims 1, 6, 10, 11, 14 and 17 are independent.

Claims 11, 14 and 17 are amended. No new matter is involved.

Reconsideration of this application, as amended, is respectfully requested.

Rejection Under 35 U.S.C. § 101

Claims 1-5 and 17-22 stand rejected under 35 USC § 101 as being directed to data structures, which is alleged to be non-statutory subject matter. This rejection is respectfully traversed.

Initially, Applicant notes that this rejection is moot with respect to claims 18-22, which have been canceled.

Claims 1-5, as previously amended, and claim 17, do not recite a data structure, per se. As amended, claims 1-5 positively recite a cable network for using data packets having a media access control frame structure to initialize payload header suppression of transmitted data packets through extended header types, which is clearly patentable subject matter under 35 USC § 101. In other words, claims 1-5, as previously amended, positively structural features such as a cable modem, which is not a data structure, and a payload data unit, which is not a data structure, but is a unit that controls data.

Similarly, claim 17 positively recite structural features other than data structures, *per se*, including a media access control frame structure embodied on a computer readable medium.

Moreover, claim 17 positively recites a method of using a media access control frame structure in a cable network and inserting parameters into a payload data unit, which are positively recited steps that are not simply data structures, *per se*. In fact, this rejection seems to be addressing apparatus claims, whereas claim 17 is a method claim. In this regard, the rejection is not relevant to the invention recited in claim 17.

Accordingly, reconsideration and withdrawal of this rejection of claims 1-5 and 17-22 are respectfully requested.

Rejection Under 35 U.S.C. § 112, First Paragraph

Claims 18-22 stand rejected under 35 USC § 112, first paragraph, for failing to comply with the written description requirement. This rejection is respectfully traversed as moot because claims 18-22 have been canceled.

Rejection Under 35 U.S.C. § 112, Second Paragraph

Claim 14 stands rejected under 35 USC § 112, second paragraph, as being indefinite because there is no proper antecedent basis for the third EH_TYPE packet. This rejection is respectfully traversed. Applicant has amended claim 14 to provide proper antecedent basis for the terms therein, including "third EH_TYPE packet."

Reconsideration and withdrawal of this rejection of claim 14 are respectfully requested.

Rejection Under 35 U.S.C. § 103

Claims 6-9, 11-13, 15 and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over US 2002/0073227 to Bunn et al. ("Bunn") in view of Applicant's admitted prior art in Fig. 1. This rejection is respectfully traversed.

During patent examination the PTO bears the initial burden of presenting a *prima facie* case of unpatentability. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444(Fed. Cir. 1992); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788(Fed. Cir. 1984). If the PTO fails to meet this burden, then the Applicant is entitled to the patent.

Applicant respectfully submits that the PTO has failed to meet this burden.

A prior art reference anticipates the subject matter of a claim when that reference discloses every feature of the claimed invention, either explicitly or inherently. In re Schreiber, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997) and Hazani v. Int'l Trade Comm'n, 126 F.3d 1473, 1477, 44 USPQ2d 1358, 1361 (Fed Cir. 1997). While, of course, it is possible that it is inherent in the operation of the prior art device that a particular element operates as theorized by the Examiner, inherency may not be established by probabilities or possibilities. In re Oelrich, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981) and In re Rijckaert, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993).

All words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

Bunn is directed to suppressing redundant fields in a full TCP protocol packet when

subsequent TCP protocol packets are transmitted across a DOCSIS network. Bunn delta-encodes

non-redundant fields in the TCP protocol packet using a delta-encoded value when subsequent TCP

protocol packets are transmitted, where the delta-encoded values represent the change in value from

the previous TCP packet for the non-redundant field.

The Office Action asserts that paragraphs [0099] and [0100] of Bunn disclose the claimed

invention.

Applicant respectfully disagrees for a number of reasons.

Firstly, paragraph [0099] merely discloses that Bunn places an extended protocol support

descriptor in a vendor-specific information field of a REG-REQ message. There is absolutely no

explicit disclosure that Bunn's extended protocol support descriptor is an EH_TYPE packet, or that

the vendor-specific information field of Bunn's REG-REQ message is an EHDR PART of a MAC

header. Nor is there any objective factual evidence presented in the Office Action to show, on a

prima facie basis, that Bunn inherently (i.e., necessarily) discloses that Bunn's extended protocol

support descriptor is an EH_TYPE packet, or that the vendor-specific information field of Bunn's

REG-REQ message is an EHDR PART of MAC header. Furthermore, the Office Action does not

explain what Bunn's extended protocol has to do with the claimed extended header types

In an attempt to remedy this deficiency, the Office Action clearly admits, on page 5, that

Bunn fails to disclose sending messages in Ethernet packet form, but that Applicant's Fig. 1 shows

that an Ethernet packet with an EH_TYPE field is used to transmit PHE rule, and concludes that it

would have been obvious to modify Bunn's message to have Ethernet packet form because Ethernet

packet is commonly used between a CM and a CMTS in a cable network,

Applicant respectfully disagrees with this conclusion for a number of reasons.

Firstly, Bunn's invention is clearly disclosed as being used in Ethernet protocol systems. In this regard, paragraph [0021] of Bunn discloses that DOCSIS cable modem networks are designed to handle 802.3 (Ethernet) style traffic. Bunn goes on to explain that its invention provides a system, method and computer program product for recognizing and optimizing the transmission of TCP/IP style traffic across a DOCSIS network. Therefore, Bunn's invention is directed to handling Ethernet style traffic. Further, in this regard, Bunn discloses, in paragraph [0083], that the headend MAC 218 is in electrical communication with the Ethernet interface 224 and, when appropriate, Ethernet packets recovered by the headend MAC 218 are delivered to the Ethernet interface 224 for delivery to the packet-switched network 112 via a router. Further, paragraphs [0089] and [0090] disclose that the MAC 314 process digital data, which may include, for example, Ethernet packets for transfer to an attached user device. Moreover, paragraph [0118] discloses use of an Ethernet card to allow for transmission in accordance with standard Ethernet protocols.

In other words, the premise of this rejection, i.e., that Bunn does not disclose sending messages in Ethernet packet format, is completely without merit.

Furthermore, notwithstanding the fact that Bunn discloses sending messages in an Ethernet packet format, Bunn completely fails to disclose that its RTP header suppression technique (disclosed, for example in paragraphs [0139] – [[0204]) utilizes EH_TYPE fields.

Applicant respectfully submits that a fair, balanced appraisal of Bunn reveals that Bunn's RTP header suppression is significantly different than Applicant's header suppression and that Bunn fails to disclose or suggest, or otherwise render obvious, the subject matter recited in claims

6-9, 11-13, 15 and 16.

In this regard, the Office Action's assertion that Bunn's paragraph [0100] and step 408 of Fig. 4, somehow discloses terminating transmission of a common payload header suppression packet, setting a packet type as a third packet, suppressing a packet into a new channel, and transmitting the packet when the second packet is a success message is simply not correct. Step 408 of Fig. 4 merely formats data packets for transmission to the CMTS in accordance with an extended protocol. This step completely fails to explain what support for an extended protocol (Ethernet being the basic protocol that is being extended with one or more additional layers) has to do with disclosing terminating transmission of a common payload header suppression packet, setting a packet type as a third packet, suppressing a packet into a new channel, and transmitting the packet when the second packet is a success message.

Additionally, Bunn is directed to determining whether the extended protocols are supported and, in order to determine this, Bunn has to retransmit the UDP message a predetermined number of times to determine if any extended protocols are supported. The Office Action fails to explain what this has to do with the claimed invention, let alone anticipate, the claimed invention, which is not directed to determining if extended protocols are supported, but is directed to reducing signaling processes required in case a cable modem wishes to change the header format of a suppressed packet – a feature not demonstrated to exist in Bunn.

Further, regarding claim 7, Applicant respectfully submits that claim 7 does not recite what paragraph [0100] of Bunn, lines 1-4, allegedly discloses, i.e., claim 7 does not recite whether or not an extended protocol is supported.

Similar comments apply to the rejection of claims 9, 15 and 16, none of which recites

whether an extended protocol is supported.

Regarding claims 8 and 12, the Office Action admits that Bunn does not disclose a CM

transmitting a message a predetermined number of times if no response is received. However, this

is not what is claimed. Claims 8 and 12 recite that the sender continuously transmits the first

EH_TYPE to the receiver until the second EH_TYPE packet is received from the receiver. Bunn

fails to disclose this positively claimed feature. Instead of addressing this claimed feature, the

Office Action merely speculates, without providing any objective factual evidence in support

thereof, as required by the aforecited case law, addresses whether it would be obvious to have a

cable modem (CM) initiate and perform the process of checking the supportability of an extended

protocol. Not only is the rejection improper because no objective factual evidence is presented to

support this proposed modification of Bunn, but the proposed modification of Bunn has not been

shown to be related to the claimed invention, i.e., the Office Action fails to show why having a

cable modem (CM) to initiate and perform the process of checking the supportability of an

extended protocol anticipates the sender continuously transmitting a first EH_TYPE to the receiver

until a second EH_TYPE packet is received from the receiver.

With respect to claim 13, which recites a combination of features including a step of

determining that the receiver cannot support the new payload header suppression rule when the

second EH_TYPE packet is not received from the receiver for a predetermined time, Applicant

respectfully submits that the Office Action fails to provide any objective factual evidence that

providing such a step would be obvious and, instead, merely speculates that such a step would be

obvious, contrary to the explicit requirements to provide such objective factual evidence in the

case law cited above.   Moreover, the Office Action fails to demonstrate by objective factual

evidence that a cable modem determining whether an extended protocol is supported has

anything to do with the claimed invention.

Nor has the Office Action provided any objective evidence of proper motivation to

modify Bunn to arrive at, or otherwise render obvious, the claimed invention.

Accordingly, the Office Action fails to make out a *prima facie* case of obviousness of the

claimed invention.

Reconsideration and withdrawal of this rejection of claims 6-9, 11-13, 15 and 16 are

respectfully requested.

Allowed and Allowable Subject Matter

Applicant thanks the Examiner for the allowance of claim 10, and the indication that claim

14 contains allowable subject matter provided the rejection of claim 14 over 35 USC §112, second

paragraph is overcome.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or

rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently

outstanding rejections and that they be withdrawn. It is believed that a full and complete response

has been made to the outstanding Office Action, and as such, the present application is in condition

for allowance.

Applicant also respectfully requests clarification of the basis for the rejection of claims 8, 12

and 13 under 35 USC §103(a).

If the Examiner believes, for any reason, that personal communication will expedite

prosecution of this application, the Examiner is invited to telephone James T. Eller, Jr., Registration

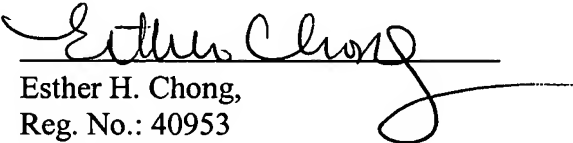No. 39,538, at (703) 205-8000, in the Washington, D.C. area.

Prompt and favorable consideration of this Amendment is respectfully requested.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies,

to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional

fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Date: June 4, 2007   Respectfully submitted,

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